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AUTHOR Lenning, Oscar T.; Mohnkern, Donald F.
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ABSTRACT

Student retention at Roberts Wesleyan College, a four-year liberal arts college in New York State, is discussed, and an overview of the college is presented. Consideration is given to changes that were made on the campus starting during fall 1983 that may have promoted student development and retention. These developments include: an innovative learning center, a freshman seminar, changes in the opening freshman orientation program, hiring a Director of Curriculum and Faculty Vitality, a faculty growth contract system, and improved on-campus counseling services. The percentage of entering freshmen dropping out during the first 6 weeks decreased from 12% in fall 1982 to 1% or 2% in fall 1984 and 1985. However, since many students postponed dropping out until the summer following the freshman year, it is recommended that attention be devoted to post-freshman retention. In addition, there is a need to focus attention on the more able students since they increased markedly as a percentage of those dropping out prior to the sophomore year. The importance of institutional research to student retention improvement is also discussed. (SW)

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PROGRAMMING DRAMATIC DECREASES IN FRESHMEN ATTRITION: WE CAN MAKE IT HAPPEN AND IR CAN HELP*

by

Oscar T. Lenning
Vice President for Academic Affairs
and Academic Dean

and

Donald F. Mohnkern
Director of Student Research and Records

Roberts Wesleyan College
2301 Westside Drive
Rochester, NY 14624
(716) 594-9471

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Ann K. Dickey, Chair
Forum Publications Editorial
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ABSTRACT

Freshman attrition has especially serious consequences, for both the institution and the student. However, truly dramatic improvements in freshman retention can be attained without undue costs if conditions are right and it is a multifaceted, campus-wide effort. This was demonstrated at a four-year liberal arts college in up-state New York, where the percentage of entering freshmen dropping out during the first six weeks decreased from 12% in the fall of 1982 to one or two percent in the fall of 1984 and the fall of 1985. In spite of this dramatic decrease in early freshman attrition, however, it appears that dropout for many students was merely postponed until the summer following the freshman year. Thus, primary attention now needs to be devoted to post-freshman retention. In addition, there is now a need to focus attention on the more able students since they increased markedly as a percentage of those dropping out prior to the sophomore year of college. With such attention and concentrated, coordinated action, the college expects to have noteworthy improvement in later student retention also, just as it was able to accomplish for its students during their freshman year. Furthermore, institutional research has a number of important roles to serve as a part of such a retention program.

General Context

It is not uncommon for 50% of the freshmen entering an undergraduate college to not graduate within one year following the expected graduation date. For example, Beal and Noel (1980) found 54% had not graduated at the end of five years in four-year public institutions with open admissions, while 36% had not graduated within five years at highly selective ones. The same study indicated that more than half of these students dropped out before the beginning of their second year. A later study by Noel (1985) reports a freshman-to-sophomore year dropout rate of 46% for two-year public colleges, 30% for four-year public colleges and 26% for four-year private colleges. Furthermore, it is not uncommon for many of those traditional-age students dropping out as freshmen to leave the college during the first six weeks of school.

Early-freshman attrition means empty seats in the classroom that may go unfilled for four years. When the cost to recruit those lost students is added, the total institutional cost is immense. With a decreasing pool of traditional-age prospective students, student attrition may not only be an institutional vitality threat but also a threat to the institution's survival. Furthermore, the cost to the freshman students who do not adjust may be especially severe--in terms of loss of self-concept, wasted time and money, lesser quality of life, an unwillingness to try again which dooms them to a far lower income and standard of living over their lifetimes, etc. If they have an unhappy experience, they will share their dissatisfaction with their friends and relatives, so such student attrition not only adversely affects a broader group of people but has negative effects on institutional recruitment. Furthermore, Forrest (1982) found evidence that the factors leading to high attrition also contribute to a lessening of student learning and development.

Attrition is a serious problem, but much can be done to alleviate its consequences. There are a number of syntheses that have brought a sense of order to a very complex process, and a variety of "theoretically-sound" and

"research-based" action programs for improving retention have been suggested by the authors of these works: Astin (1975, 1985); Beal and Noel (1980); Cope and Hannah (1975); Forrest (1982); Lenning, Beal, and Sauer (1980); Lenning, Sauer, and Beal (1980); Pantages and Creedon (1978); Pascarella and Terenzini (1980) and Tinto (1975). Furthermore, a recent book by Noel, Levitz, and Saluri (1985) presents many practical, step-by-step guidelines and strategies for improving retention. In the preface to that book the following claim is made: "Our experience consulting with more than 375 colleges and universities over the past decade suggests that there are few institutions in this country that could not reduce their freshmen-to-sophomore attrition by one-third. And our success in working with these institutions indicates that this is a realistic goal."

An announcement from the dean of student services office of Roberts Wesleyan College in the summer of 1985 suggested that even better improvements in retention can be obtained through a campus-wide, integrated, well-planned student retention program. They reported the following dropouts during the first six weeks of each academic year since 1982: 1982--18, 1983--5, and 1984--0. Converted to percentages and adding the later results for the fall of 1985 gave the following dropout percentages: 1982--12%, 1983--3%, 1984--0%, and 1985--1%. Therefore, in the fall of 1985, the academic dean and the registrar decided to expand that study and do an in-depth analysis.

Description of the Study and its Limitations

In studying college impact, the presumed only way to have any empirical assurance that a particular intervention has impacted student retention is to hold all other variables constant and compare the retention percentage of this treatment with a control group where the intervention has not been applied (Beal and Pascarella, 1982). A significant retention percentage difference between the two groups implies that the treatment has impacted retention, either positively or negatively depending on the direction of change. The problem with such a study is that recent research and theory suggest strongly that for optimum impact on stu-

dent retention to occur a campus-wide, multifaceted approach involving integrated application of many different treatments to campus programs, services, attitudes, and behaviors is needed (Lenning, Sauer and Beal, 1980; Noel, Levitz, and Saluri (1985). Edward Williams College of Fairleigh Dickinson University reduced its attrition between the freshman and sophomore years from 59% to 7% with such a multifaceted approach (Vehrkens, 1986).

Differences in specifics are important (Lenning, Sauer and Beal, 1980):

> . . . how the program is carried out (process), and the way that faculty, staff and students are prepared for and involved in the program, are crucial factors . . . the relationships among and interactions between institutional, faculty and staff, student, and action program characteristics are determining factors. The particular program called for depends on an analysis of attitudes, relationships, faculty and staff capabilities and readiness, student groupings, student needs, projected alternative cost/benefit feasibility, etc. It is clearly an individual institution decision, although knowing what has worked in other institutions and under what conditions can be helpful. (p. 4)

In view of the above, the decision was made that a total system of changes would be instituted as soon as feasible, with adjustments and refinements on an ongoing basis. Thus, no attempt could be made to ascertain cause-and-effective relationships between single factors and student retention improvement.

A number of studies suggest that, even though the decision to leave is made early, students may hold off leaving until the end of the first or second semester of the freshman year. Therefore, we also examined the year-to-year changes in the percentage of entering students who did <u>not</u> enter the second semester of their freshman year, and of those who did not enter their sophomore year.

Consultation with one of the campus experts in statistics indicated that since we were dealing with the total population each year, the use of statistical tests would be inappropriate. (We had been thinking of using analysis of variance to determine whether year-to-year mean differences were statistically significant, and to use some sort of statistical trend line analysis.) It was suggested that we merely "eyeball" the differences and decide if they had any practical significance for the College.

The Campus Context

Roberts Wesleyan is a suburban undergraduate college located eight miles southwest of downtown Rochester, New York. (Rochester is a major metropolitan, cultural, artistic, technological, corporate, and foreign trade center in upstate New York.) It is a small, non-sectarian, independent, co-educational liberal arts college with major applied professional programs that enroll the majority of its students (nursing, business, computer science, teacher education, social work; listed in order of program size). The College's emphasis is on developing "liberally educated professionals." Although it has independent status and a self-perpetuating Board of Trustees, the college was founded by a church (the Free Methodist Church) more than a century ago (1866), continues close ties with the founding denomination and a number of other Protestant denominations, has life-style requirements of no smoking or drinking, and attempts to address the entire person as a physical, psycho-social, rational, spiritual being.

These characteristics lead to self-selection that attracts motivated, values- and service-oriented students that are mainly traditional in age (95%), represent 34 religious denominations, and hold the work ethic. With more than 90% of its students from New York and contiguous states, it is decidedly a regional institution. Students are largely from low and middle income families (85% of the students qualify for Federal financial aid and the annual aid packages, including loans, averaged about $5,000 per student toward a total cost of $7,900 for 1985-86), and each year there are a number of first-generation college students.

Although relatively non-selective (85-90% of applicants are accepted each year), ability level averages have generally been above the national college-bound means--SAT verbal-460, SAT quantitative-485, and slightly over 60% ranking in the top two quartiles of their high school graduating class. As is true of most colleges nationwide, serious deficiencies in reading ability and comprehension exist among entering freshmen. As measured by the Nelson-Denny Reading Test, the majority of entering students are reading in the lower half on the Nelson-Denny

norms in the critical skill areas, with the lowest quartile having the most students. On all of these entering-student factors, the levels have remained relatively constant over the past six years, which suggests that any changes in student retention occurring are the result of institutional treatment and environmental changes.

During the last half of the decade of the seventies, enrollment at Roberts Wesleyan decreased slightly each year to a low head count of 599 (580 FTE students) in 1981-82, about 450 of whom lived in the campus dormitories that had a capacity of 500. Almost half of the students were in nursing and music, very expensive programs. These two programs--along with social work, the fourth largest program at that time--were nationally accredited, which made them even more expensive. As a result, the student-faculty ratio was under 11:1 in 1980-81. (By the fall of 1985-86, the student-faculty ratio was approaching 13:1.) Therefore, when the double-digit inflation of the late seventies occurred, it became very difficult for the college to pay its bills and deficits ensued. By the end of 1980-81 the accumulated deficit in the current fund totaled $774,000.

As the gravity of the negative financial situation became apparent, such expenses as faculty travel were eliminated. The Roberts Wesleyan faculty has always been a very dedicated faculty with excellent teaching skills, but faculty morale plummeted as a result of this and other matters. In 1980, the college's president announced his retirement. A new president was appointed in December of 1980 who assumed office in July of 1981. He brought in a new team of administrative officers and took harsh steps to eliminate deficit spending. At the same time, spending on advertising and student recruitment materials was increased several fold, including the layoff of about a dozen faculty and staff and the freezing of all salaries for 1981-82. In spite of such harsh measures, campus morale increased markedly because everyone knew that something major had to be done and steps were now being taken to turn around the adverse financial situation.

With the strong professional and pre-professional programs at the college and continually decreasing liberal arts enrollments, the liberal arts faculty had felt their survival to be threatened for a number of years. As a result they had blocked all attempts to develop a business administration program. With the financial situation being faced in the early eighties, however, those faculty relented. The new business administration program was implemented in the fall of 1982 and has grown rapidly until it is now the second largest program.

During the fall semester of 1981, the new academic dean visited individually with all members of the faculty in their offices to get to know them and to hear about their concerns and aspirations for the college and their respective programs. He also discussed institutional needs with the other cabinet members and with selected staff. Based on this dialogue and input, he developed rough-draft problem statements for each of ten areas and appointed a faculty or staff member he knew was interested to lead a task force of others interested in that area. Each task force was provided with the guidelines for development of a proposal for Federal Title III (Developing Institutions) funding and asked to have a final draft proposal section ready for review by the dean and an outside consultant by a specific date. As a result of these efforts, in July of 1982, notification was received from the Federal government that the college had been awarded a five-year Developing Institutions grant projected to total about one and one-half million dollars of "money on the margin" for program development purposes. Included in the grant was money to develop: a unique learning center, new state-of-the-art academic and administrative computer systems, a new general education program, support for increased faculty development activity, six innovative new academic programs (art education, communication, computer science, foreign language and culture, gerontology, and health dynamics), a new academic advising program, a well-designed career planning and placement office that would include a computerized interactive guidance system among its resources, assistance for developing prospective student needs assessment and staff development to

improve student recruitment capability, a development office donor analysis system, and a needs assessment study of the potential, and strategies needed, for a successful capital campaign (the last capital campaign had been twenty years earlier).

From the fall of 1981 until the fall of 1985 the student head count increased from 599 (583 FTE enrollment) to 715 (631 FTE enrollment), while at the same time the college's largest program (nursing, which was also decreasing in student numbers nationwide) decreased from 191 to 145 students. At the same time, each of these years was ending in the black financially, the college has successfully completed a 6.5 million dollar campaign to build a Life Fitness Center, and the college is currently in the best financial condition of its history.

There are other developments at the college that are potentially significant but too numerous to mention. Several will be discussed later in this paper.

The Campus Changes Perceived to Impact Entering Freshman Retention

As indicated earlier, much research and theory about student retention has been published, and a number of syntheses of that literature have reached common conclusions about positive and negative contributors to student retention (after confounding variables have been controlled for). Programming that facilitates the positive correlates and/or negates the effects of the negative correlates of student retention would thus be expected to contribute to student retention. Anderson (1985) made an interesting attempt to use force field analysis to summarize the external and internal student factors affecting student retention, as shown in Figure 1. Anderson notes, regarding interpretation, that:

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Figure 1 goes about here

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> The forces acting upon students and affecting attrition and persistence vary in intensity and in type. The intensity or strength of each force varies in magnitude from person to person and from group to group. Some students will have many, others will have few forces acting either for or against them as they strive for their degrees. Thus, when using the force field analysis scheme to analyze and predict persistence or attrition, we must take individual and group differences into account. We must also take institutional differences into account. Clearly, demands and difficulties

> vary from college to college; degree requirements, curricula, assignments, professors' expectations, competition, resources, services, and general environment all vary. Thus we must analyze both the student and the individual institution in order to predict and explain attrition rates. This scheme assumes that all behavior is caused. Identifying the exact cause of a particular behavior (in this case attrition) is complicated. There is seldom a single cause for any human behavior; rather, the causes are multiple and interrelated . . . a complex mesh of causal factors, forces, or obstacles is responsible. Nevertheless, as we identify the various forces acting upon and within particular students or groups of students, and assess the intensity of those forces while recognizing the unique characteristics of the institution we are studying, we can begin to analyze the causes of attrition and to plan programs, implement services, change policies and alter procedures to promote persistence (pp. 51-52).

Some clarification of Anderson's forces is needed. Parents supportive of college (familial aspirations for college, education of parents, identification with and involvement of the parents with the college, etc.) is a positive force, while parents lacking such characteristics tend to be a negative force; just listing parents and showing a positive arrow is misleading. Similarly, some high school teachers are very influential, but not in certain disciplines, while counselors tend to be less influential at most high schools.

Work demands are not always the negative force suggested by Anderson. Astin (1975, 1985), in particular, has demonstrated that involvements of all kinds within the college environment facilitate student retention, including work that may be a little more heavy or pressurized than is optimum for the student to succeed in college. It can still be supportive involvement, and especially for some students. Excessive involvement, in any activity, will tend to be detrimental, but what is excessive depends on the college and the student. A long list of various kinds of student-college involvement could have been included in the diagram as positive forces, and these are factors that an institution can program and provide incentives for. They are examples of what Lenning (1982) has termed "interaction variables." Another type of interaction variable that the college can impact programmatically is student-institution fit. Lenning (1982) lists a number of interaction variables that theory and research results endorse as generally being supportive of student success: student satisfaction, social

integration/peer group relations, family-college relationship, out-of-class interactions with faculty, faculty concerns for students and teaching, institutionally-generated student development, commitment to the college and graduation, extracurricular involvement, responsiveness to student complaints and expressed needs, student expectations and realities, academic program involvement and success, learning-preference and teaching-method congruence, compatibility between student and institutional values, student participation in various student services, student ability and motivation and college demands, comfortable and yet challenging environment for the student. Additional types of "fit" that support student retention are suggested by Holland's (1973) theory of similar/dissimilar personality and environmental types, Festinger's (1962) cognitive dissonance theory, Spady's (1970) and Tinto's (1975) social and academic integration models, Rootman's (1972) person-role fit model, Bean's (1982) industrial model of student retention, and Fishbein and Ajzen's (1975) intentions and behavior model.

When the new administration arrived at Roberts Wesleyan in the summer of 1981, the college was just completing the first year of participation in a Council of Independent Colleges Project on Quality Undergraduate Education (QUE), funded by the Carnegie Foundation. The purpose of the project was to help each college develop a special program on campus that was vitally needed. Faculty development was a major part of this project, and included a focus on quality process in program development, including identifying student needs and outcomes at graduation, gaining campus acceptance of change and obtaining faculty ownership and internalization, pilot testing the program or aspects thereof before implementation, etc. (Whenever deemed feasible, pilot testing was a part of the program development for student retention.) In addition, a campus-wide committee on student retention, called the "step-ahead committee," had reviewed the student retention literature and was making recommendations for the college regarding how to improve student retention. With all of the above and the preceding section of this paper as background, let us review the changes made on campus beginning in

the fall of 1983 that it was believed would assist student development and retention.

Innovative Learning Center

For its local QUE project, Roberts Wesleyan College had targeted development of a learning center. There was growing commitment to the need for such a center on campus when the new academic dean arrived to assume his position in the summer of 1981, and--in addition to the major synthesis works in student retention--the new dean had recently completed a study of innovation in student learning centers (Lenning and Nayman, 1980). Preliminary plans for the Learning Center were completed during the 1981-82 academic year, and resources to pilot test and implement the Learning Center were provided by the college's Title III grant.

The result was a learning center that merged the new communication technologies (including video tape and microcomputers) with assessment, learning, and study-related skills development. Care was taken to make the learning center be perceived as being for all students, including able students needing special enrichment challenges. The Center provides: technological equipment for the use of both students and faculty; helpful stimulating and informational newsletters targeted separately for students and for faculty; workshops and seminars for faculty on such topics as teaching communication and critical thinking across the curriculum, and developing learning modules; workshops and seminars for students on such topics as time management, learning to learn, taking better notes, finding a topic, preparing for and taking exams, studying your text, writing first drafts of research papers, memory, revising research papers and giving credit where due, managing stress; testing and diagnosis; lining up able students with resource people who can provide needed challenge on particular topics; subject-matter tutoring; and direct consultation and assistance individually and in small groups on writing, learning styles, reading, study skills, using the microcomputer to increase one's skills, etc. Students placed on academic probation are no longer

just required to limit their load of courses, but are also required to report regularly to the Learning Center for consultation and learning assistance.

Freshman Seminar

A multi-disciplinary freshman seminar was pilot tested with two sections in the fall of 1983, and a revised version was implemented for all entering freshmen in the fall of 1984. Sections of students are limited to no more than 15-20 students. The purpose as stated in the syllabus is "to help students adjust to college life and establish patterns of thinking, writing and learning within a community of "learners," and the basic assumption is that learning is a dynamic process of changing and growing which involves integrating the many aspects of persons--emotional, intellectual, moral, physical, social, and spiritual." The two-semester-hour class is lead by a faculty mentor who has volunteered for such a role and who is both teacher and advisor for each student. The mentor receives three rather than two semester hours of teaching load credit (a reward to encourage the college's best teachers to participate). Assisting the faculty mentor is a sophomore student mentor (of the opposite sex if possible). A topical approach is taken, with a special focus during the last half of the semester on critical thinking and what it means to be educated. A transitional process to a disciplinary advisor from the area of the student's intended major is begun halfway through the semester. Care is taken in choosing the faculty and student mentors, and extensive orientation and training is provided to prepare them for their roles. Three of the sections each year are for students lacking certain academic abilities and skills; learning center staff serve as the mentors for these sections.

Dramatic Freshman Orientation Changes

In the fall of 1983, important changes in the College's opening freshman orientation program were implemented. These changes included: elimination of the College's summer orientation program (which is not to say that a summer orientation program is undesirable) and focusing all formal planning on the fall

orientation; having all freshmen and other new students come in several days earlier than in past orientations; new approaches to orientation programming that emphasize personal interaction in the development of "significant others"; involving freshman mentors with assigned students early in the orientation program; a special registration for new students a day prior to the arrival of returning students; improved orientation and preparation days for student leaders prior to the arrival of new students; improved registration procedures (including more effective logistics and incorporating the computer directly into the registration process); a new computerized interactive guidance system; etc.

Other Factors

In the summer of 1983, Title III funds were used to hire a Director of Curriculum and Faculty Vitality. An emphasis was placed on teaching and advising improvement and on faculty morale through special workshops and seminars and providing individual consultation services to faculty. An award for faculty professional accomplishment was implemented during the 1983-84 academic year to complement the College's longstanding Muller Award for Teaching Excellence. In the spring of 1983, one member of the faculty did a synthesis of the literature on improving the quality of out-of-class interaction between students and faculty and the impact of such interaction on student retention and development (Berry, 1985). This paper was distributed to the faculty and discussed widely, and heightened the faculty's awareness regarding the importance of interpersonal relationships between faculty and students, in and outside of the classroom.

In-depth discussions of an extensive philosophy of education statement that the academic dean had proposed in the fall of 1983, which was largely based on student development theory and research, was discussed and modified greatly by the faculty over the next two years. This discussion led to much thinking by the faculty about what is quality instruction and how students best learn. A revised version of the philosophy of education statement was formally approved by the faculty in the spring of 1985 after two full years of discussion.

Three years of faculty discussion, beginning in the fall of 1983, related to how to improve the general education program and related teaching. The result was a general education model and a new general education program for the College.

During the fall of 1983 a unique faculty growth contract system was pilot tested with 12 faculty. It had been developed by the Faculty Professional Development Committee over the previous two years, and had been approved by the faculty in spring 1983. The administration has since committed significant resources to this system, and it has not only stimulated the faculty to improve their teaching and to develop professionally, but it has had a major impact on faculty morale, which effects their teaching and how they relate to students.

In the summer of 1983, a half-time Director of Student Advising was appointed. The new system focused on helping the faculty help students plan for their after-college careers. It led to more in-depth and meaningful discussions between students and their faculty advisors within the disciplines.

There were a number of additional changes during the period that also should have had an impact on student retention. Greatly improved, on-campus counseling services were implemented beginning in the fall of 1984. Better orientation of prospective students by the College's admissions counselors was taking place. During the entire period there was an improved appearance of the campus and facilities due to improved maintenance procedures, and taking care of deferred maintenance, which positively impacted student morale and their pride in the College. Spiritual Emphasis Week, which provides a concentrated time of uplift and support for those who are experiencing adjustment problems, was moved from the middle of the semester to the first week of classes. Improved building maintenance and business office services through imrpoved procedures, computer software changes and addition of specialized personnel to work with the students on their finances were implemented in response to student complaints. (Prompt and effective response to "brass tacks" issues is imperative for good student retention to occur.) A final item that should be mentioned is that major ongoing

advertising campaigns, using 30-second spots that were honored for their quality by the Council for the Advancement in Support of Education (CASE), were shown regularly on all four Rochester commercial TV stations during 1983-1985. These commercials were seen by most of our faculty, staff, and students and undoubtedly affected their pride and their image about the quality and prestige of the place.

Results of the Special Retention Efforts

The results achieved by the retention program are summarized in Table 1. The attrition rate during freshman orientation week was uncomfortably high. This was the result of new students coming to campus but leaving before the orientation program was completed. The activities put in motion in 1982 and 1983 to assist these students apparently were quite effective. Typically only one or two

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Table 1 goes about here

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students arriving on campus have followed this pattern in the last three years.

At this date the holding power of the college through the first six weeks of the freshman year is outstanding. Of the 627 new freshmen entering in the last three years, only 15 dropped in the first six weeks; under 2%. Clearly, the program is effective during this period in our students' college careers.

Our problem has now moved to the summer following the freshman year. Twice as many students drop out at this point as have dropped out prior to this point. The retention rate is down to 80% at the beginning of the sophomore year, and improvement is needed.

Discussion

Interpretation and Application of the Findings

Tables 2 and 3 present student ability and program area enrollment trends for the period under study that may help us interpret the results. Table 3 provides student numbers for all students declaring a major, not just for entering freshmen.

Tables 2 and 3

Regarding ability, although the average for those who leave is definitely lower than for those who stay, a number of very capable students leave. The quintiles for high school rank, however, imply that, as the student retention program was implemented, students primarily at the average and lower levels of ability were being helped to stay in school. From fall 1983 entering freshmen to fall 1984 entering freshmen, the percent of those dropping out who were in the top quintile increased from 28% to 45%. This, along with the percent for those dropping out this last January, suggests that the college now needs to devote special attention to retaining able students. For example, the full-scale honors program being planned now needs to be implemented so that able students can be challenged more appropriately and have more opportunity for independent study.

Table 3 indicates that there were clear shifts in program selection in a number of areas. How this has impacted the retention results is not clear.

The College is beginning a formal survey questionnaire study of student reasons for withdrawal. Exit interviews with departing students suggest that financial problems and grades are the major reasons for leaving, but the largest group of freshman dropouts leave during the summer between their freshman and sophomore years and thus are not available for an exit interview.

At this point there are many unanswered questions. A great deal remains to be done and much data must be collected to serve as a basis for future decisions. Some of the questions which arise are:

1. Has the effort by the college simply deferred the process which leads to dropout to this point in the students' careers or has the nature of the situation changed and have new problems appeared?
2. What are other characteristics of these students which would give insights as to the kind of help needed to remain in college?
3. Should all students be encouraged to stay in college?

4. What changes in the program described earlier need to be made to assist the students in achieving their goals, and what segments should be added?

The findings and these questions are important for any college or university concerned about undergraduate student retention. A cumulative trail of retention percentages are needed to understand the total situation and other kinds of data are needed to interpret them. Too often institutions have relied on only end-of-freshman year and graduation percentages. Different student problems and situations necessitating different institutional interventions apparently occur at various points within the students' college careers and within the freshman year. Finally, what happens prior to arrival on campus and after arrival but before the start of classes is as important in some cases to reducing student attrition as is what happens after the start of classes. This is probably especially true for traditional-age students.

The Importance of Institutional Research to Student Retention Improvement

When we conducted our initial analysis, a surprise awaited us in that our entering freshman first-six-week dropout percentages did not agree with those that had been announced by the dean of student services office a year earlier (they were lower). We finally were able to duplicate them, however, when we found out from that office that the total for each year had included those students leaving prior to the start of classes, after being on campus during at least a part of the freshman orientation period. Such lack of definition and complete communication would probably not have occurred had an effective office of institutional research been present on our campus to coordinate data collection and use. We probably also would have had additional useful data available to help us interpret our study results. (The new administration, after its arrival, had assigned student research to the registration office, retention research to the dean of student services office, and overall institutional research and planning to the Title III director; but none of those offices had time for or could give priority to such activities, which meant that very little got done.)

Institutional research has a number of vital roles to play related to a multifaceted, campus-wide student retention effort. Institutional research is the unit to make certain that appropriate, well-defined multiple retention-index base-line data are collected on an ongoing basis, communicated effectively throughout the campus community, and used. Institutional research is the unit to coordinate the design, development, and operation of a computerized student cohort tracking system, which is needed on all but the smallest campuses in order to keep a good ongoing picture of what is happening in the area of student retention. Institutional research needs to stimulate into being, and assist as needed, planning, design, and carrying out of research studies related to student retention, such as needs assessment, reasons for dropping out, and prediction of probable dropout so that proper intervention can be conducted for those most susceptible to dropout. Evaluation of retention programming effectiveness is also an area that needs institutional research advice and involvement.

The institutional research office can also keep the remainder of the campus community informed about the latest research and theory related to student retention and be a primary advocate for retention improvement that provides encouragement and support for retention efforts to continue and be refined, and for good retention research and evaluation to take place on a continuing basis. Finally, as Pascarella (1985) writes in the conclusion to his manuscript, "one of the less obvious but potentially important benefits of institutionally sponsored research on student persistence/withdrawal behavior is that this research may lead institutions to look critically at the very processes by which they educate students--and it is, after all, the education of students that is a fundamental reason for the institution's existence (pp. 90-91)." This is especially true when one begins to realize that what affects student retention invariably affects student learning and development in the same direction, and vice versa.

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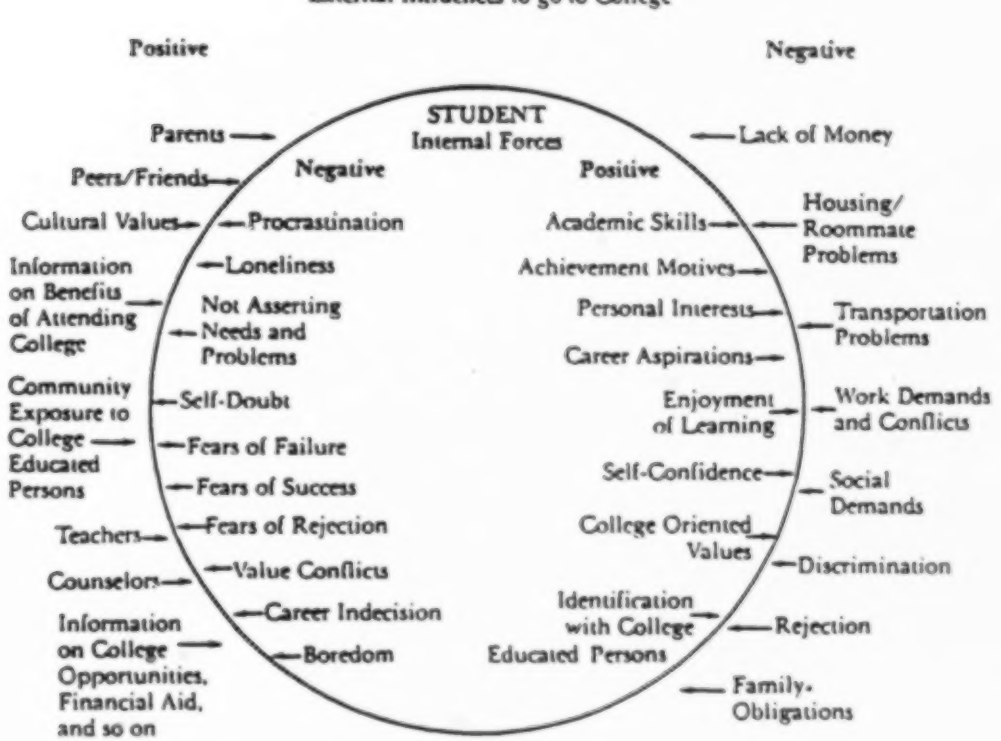
Figure 1

ANDERSON'S FORCE FIELD ANALYSIS OF COLLEGE PERSISTENCE[a]



[a]Exerpted from Anderson (1985)

Table 1

FRESHMEN DROP-OUT PERCENTAGE TRENDS

	Students who entered as freshmen at the beginning of:			
	1982-83 (N=150)	1983-84 (N=172)	1984-85 (N=161)	1985-86 (N=144)
Left after arriving on campus as freshman and before attending classes	8%(12)	1%(2)	1%(1)	0%(0)
Dropped out during first six weeks	12%(18)	6%(10)	1%(2)	2%(3)
Dropped out before Semester II began	19%(28)	24%(42)	9%(15)	9%(13)
Dropped out before the start of third semester	33%(49)	26%(44	29%(46)	NA

Table 2
ABILITY LEVEL TRENDS
(Levels for those dropping out before the 3rd semester are in parentheses)

	For Freshmen entering in the fall of: 1982	1983	1984	1985*
SAT Verbal Score Mean	468(418)	457(415)	425(438)	449(376)
SAT Quantitative Score Mean	494(434)	482(449)	486(470)	486(379)
% in top fifth on high school rank	46(28)	45(28)	50(45)	43(56)
% in 2nd fifth on high school rank	22(8)	23(23)	25(18)	26(11)
% in 3rd fifth on high school rank	17(44)	21(26)	15(16)	16(11)
% in 4th fifth on high school rank	10(16)	10(23)	8(18)	11(22)
% in bottom fifth on high school rank	5(4)	1(0)	2(3)	4(0)

*Since the 3rd semester after entrance will not begin until next fall for 1985 entering freshman, the dropout group for this entering class was those who dropped out prior to the start of their second semester (not the 3rd semester as in the other columns).

Table 3
ENROLLMENT BY PROGRAM AREA

	Fall of 1980	1981	1982	1983	1984	1985
Art	17	12	15	10	9	3
Art Education	3	8	4	5	6	15
Business Administration			31	51	58	74
Biology	25	12	17	20	18	16
Chemistry	3	4	1	3	8	8
Communication						8
Computer Science	11	16	25	29	44	44
Contemporary Ministries						13
English	8	8	9	11	19	13
Fine Arts Music	22	23	27	27	16	20
History/Social Sciences	16	11	10	11	12	14
Mathematics	7	9	9	14	22	23
Music Education	43	45	52	42	42	36
Nursing	208	191	186	170	156	146
Other Science	8	13	18	13	15	8
Psychology	26	27	22	27	32	32
Religion and Philosophy	45	42	42	46	37	44
Social Work	37	39	42	48	40	36
Sociology	5	5	3	6	6	4
Teacher Education	43	51	44	45	64	71

Over the six years prior to 1980, enrollments had declined moderately in music education, social work, English, and religion/philosophy. In each case, however, the situation stabilized or turned around. Current upward trends are apparent for business administration, computer science, mathematics, teacher education, and psychology (although it would appear that computer science and psychology are now leveling off). Although the numbers are still small, it appears that an upward trend may have begun also for chemistry, communications (new program), and history/social sciences. The dramatic downward decrease in nursing enrollment has continued; and there are now clear downward trends in social work, biology, art, English, and music education.